

Nosko Natalia Viktorovna

associate professor,
Brest State Technical University, Brest,
Republic of Belarus

Pilipyuk Ivanna Mikhaelovna

Brest State Technical University, Brest,
Republic of Belarus

THE ALGORITHM OF DISTRIBUTION OF SCARCE GOODS

At the enterprise, in connection with inconstancy of demand and impossibility to expect new clients, there can be a deficiency on some goods. And there is a question: "To what buyer to ship scarce goods? [1]. It causes relevance drawing up the scheme of distribution of scarce goods on buyers

It is impossible to speak about sure economic benefits as the profit on these goods remains invariable, and it is possible to consider that the choice between buyers doesn't matter. However the algorithm of distribution of goods between buyers bears a certain benefit – maintenance of image of the company and preservation of significant clients.

The essence of algorithm of distribution of scarce goods consists in the following. First of all the goods are shipped to so-called social clients are schools, kindergartens, etc., and also first of all it is possible to bring the new client.

The priority is given to the new client to create for it positive image, and then, there is a probability that the client will become constants, and demand from its party will increase. Further the rating of clients is formed.

Criteria of drawing up a rating are the client's share in a total turnover, a margin and frequency of the order (an example of drawing up a rating see in table 1).

The rating will be removed on the basis of the listed criteria for a certain period, by summation of specific weight on each of them.

Table 1 – Basic data for drawing up a rating on buyers

Table 1

Basic data for drawing up a rating on buyers

The client	Number of orders		Margin, million rubles.		Order frequency		Point
	Amount	Specific weight	Amount	Specific weight	Amount	Specific weight	
1	2	3	4	5	6	7	9
1	1	0,036	2,360	0,082	8	0,111	0,228
2	4	0,143	3,340	0,116	13	0,181	0,439
3	3	0,107	3,000	0,104	16	0,222	0,433
4	4	0,143	5,900	0,204	6	0,083	0,430
5	2	0,071	1,200	0,042	8	0,111	0,224
6	1	0,036	0,900	0,031	3	0,042	0,109
7	1	0,036	0,560	0,019	3	0,042	0,097
8	1	0,036	1,000	0,035	5	0,069	0,140
9	8	0,286	8,340	0,289	6	0,083	0,658
10	3	0,107	2,300	0,080	4	0,056	0,242
In total	28	1	29	1	72	1	-

Then, the got points are grouped in decrease (see tab. 2). That is the clients taking the first positions have a priority.

Table 2

Rating of buyers

Rating	The client	Number of orders		Margin, million rubles.		Order frequency		Point
		Amount	Specific weight	Amount	Specific weight	Amount	Specific weight	
1	2	3	4	5	6	7	8	9
1	9	8	0,286	8,340	0,289	6	0,083	0,658
2	2	4	0,143	3,340	0,116	13	0,181	0,439
3	3	3	0,107	3,000	0,104	16	0,222	0,433
4	4	4	0,143	5,900	0,204	6	0,083	0,430
5	10	3	0,107	2,300	0,080	4	0,056	0,242
6	1	1	0,036	2,360	0,082	8	0,111	0,228
7	5	2	0,071	1,200	0,042	8	0,111	0,224
8	8	1	0,036	1,000	0,035	5	0,069	0,140
9	6	1	0,036	0,900	0,031	3	0,042	0,109
10	7	1	0,036	0,560	0,019	3	0,042	0,097
In total		28	1	29	1	72	1	-

It is also possible to carry out ABC analysis on clients and to distribute scarce goods, satisfying the service level established for group (for example, for group A advise to establish the level of service of 95-97%) [2].

Stages of drawing up a rating of buyers see in fig. 1.

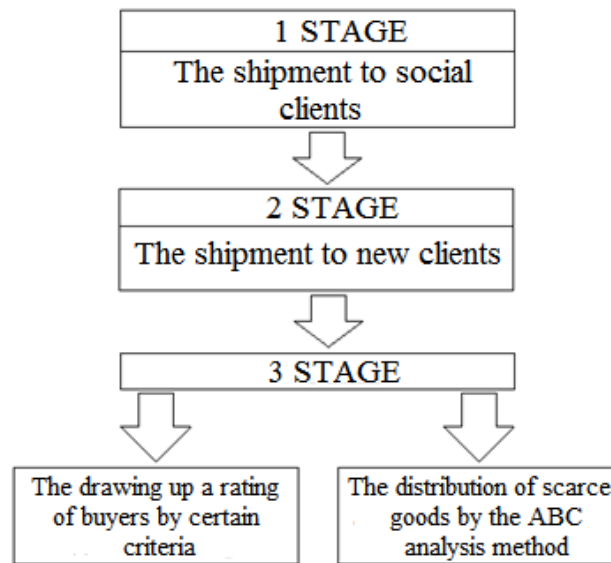


Figure 1 – Sequence of shipment of scarce goods

Thus, this algorithm doesn't give economic effect at once, it gives strategic advantages: image maintenance, providing important clients with goods and adjustment of business relations with new clients.

References

1. Circassians, A.G. Forecasting of demand in logistics//Problems of forecasting 2005. – No. 5(11). – Page 18-41.
2. Dyomin, Century. Optimization of key operations of warehouse technological process / V. Dyomin [An electronic resource]. – Access mode://<http://iteam.ru>. – Date of access: 10.06.2012.